

Abstract

A method for forming an organic electronic device, which method comprises the steps of:

- a) forming a negative image of a desired pattern on a substrate or device layer with a lift-off ink;
- b) coating a first device layer to be patterned on top of the negative image;
- c) coating one or more further device layers to be patterned on top of the first device layer to be patterned; and
- d) removing the lift-off ink and unwanted portions of the device layers above it, thereby leaving the desired pattern of device layers.

The method allows the formation of a device structure wherein the device layers to be patterned are self-aligned. The method enables a multiplicity of layers to be patterned in a single set of printing and lift-off steps using one pattern which ensures the excellent vertical alignment of edges, which would be difficult to achieve by direct printing. Horizontal alignment can also be achieved. The size of the device features can be reduced below the actual printing resolution. Examples of organic electronic devices include OFETs, OLEDs, memory, sensing elements, solar cells, photo-sensors, photoreceptors for electrophotography and the like.